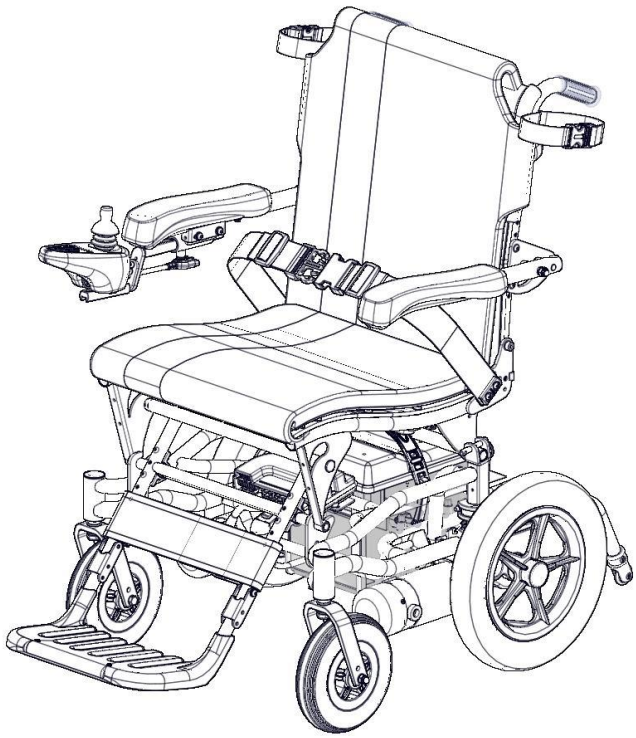
karma

A Better Wheelchair, A Better Fit

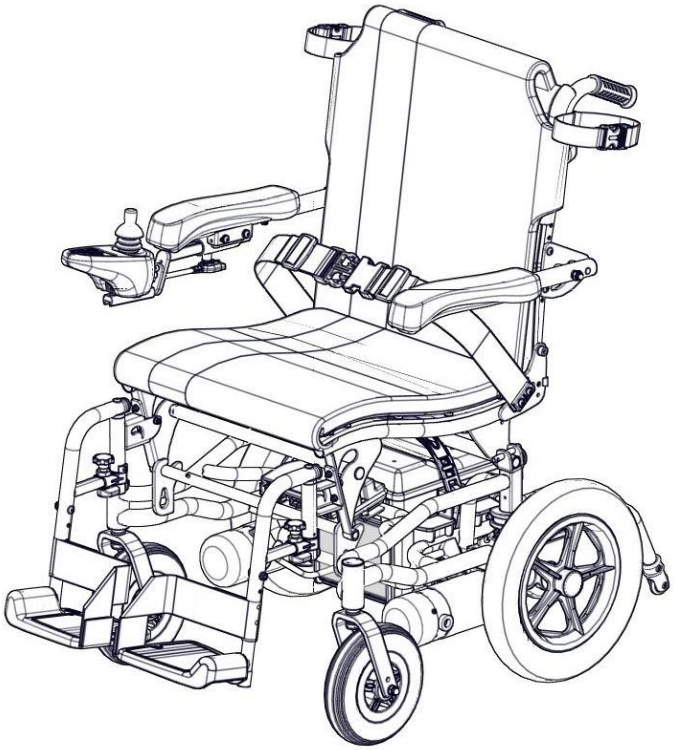
Powered Wheelchair Owner's Manual

Ergo Traveller

(KP-10.3 Series)



KP-10.3



KP-10.3S

CE TÜV SÜD ISO 9001 G.M.P MEDICAL DEVICE ISO 9001

IMPORTANT

Do not attempt to use the powered wheelchair before a qualified person has explained to your satisfaction how to operate it without any risk to yourself or others.

WARNING

- **Do not operate this powered wheelchair before first reading and understanding this owner's manual. If you are unable to understand the warnings, cautions, suggestions and technical instructions, please contact a dealer, healthcare professional or applicable personnel before attempting to use this power wheelchair -- otherwise, injury or damage may occur. If any procedures other than those described in this owner's manual, it must be performed by a qualified technician.**

THE INFORMATION CONTAINED IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE BY KARMA.

WARNING

- **As a manufacturer of powered wheelchairs, KARMA endeavors to supply a wide variety of powered wheelchairs to meet the many needs of the user. However, the responsibility of final selection of the type of powered wheelchair to be used by an individual rests solely with the user and his/her healthcare professional capable of making such a selection.**
- **KARMA recommends that powered wheelchair users NOT be transported in vehicles of any kind while in a powered wheelchair. As of this date, the Department of Transportation (U.S.) has not approved any tie-down systems for transportationof a user while on a powered wheelchair in a moving vehicle of any type. It is the position of KARMA that users of powered wheelchairs should be transferred into appropriate seating in vehicles for transportation and make use of the restraints made available by the auto industry. KARMA cannot and does not recommend any powered wheelchair transportation systems. It is the responsibility of the Durable Medical Equipment (DME) Dealer, therapists and other healthcare professionals to determine if a seat positioning strap is required to ensure the safe operation of this equipment by the user. Serious injury can occur in the event of a fall from a powered wheelchair.**

Operating Information

- Performance adjustments should ONLY be made by professionals of the healthcare field or persons fully conversant with this process and the driver's capabilities. Incorrect settings could cause injury to the driver or bystanders and damage to the powered wheelchair and surrounding property.
- To determine and establish your particular safety limits, practice bending, reaching, mounting and dismounting activities in several combinations in the presence of a qualified healthcare professional BEFORE attempting active use of the powered wheelchair.
- For individuals with balance problems, practice mounting and dismounting activities WITH AN ASSISTANT in the presence of a qualified healthcare professional.
- If so equipped, DO NOT operate the wheelchair without anti-tippers being installed. Anti-tippers MUST BE attached at all times.
- DO NOT attempt to reach objects if you have to move forward in the seat or pick them up from the floor by reaching down between your knees as this may cause loss of balance.
- DO NOT lean over the back of the chair to reach objects behind you as this may cause the powered wheelchair to tip over.
- DO NOT shift your weight or sitting position toward the direction you are reaching as the powered wheelchair may tip over.
- DO NOT use an escalator to move a powered wheelchair between floors. Serious bodily injury may occur.
- DO NOT operate in car lanes on roads, streets, highways, etc.
- DO NOT attempt to move up or down an incline with a water, ice or oil film.
- DO NOT attempt to ride over curbs or obstacles. Doing so may cause your powered wheelchair to turn over and cause bodily harm and/or damage to the powered wheelchair.
- DO NOT make sharp turns, in forward or reverse, at excessive speeds.
- DO NOT attempt to lift the powered wheelchair by its casings and seat.
- DO NOT attempt to lift the powered wheelchair by any detachable parts. Lifting by means of any detachable parts of a powered wheelchair may result in injury to the user or damage to the powered wheelchair. Please hold onto the frame when lifting your wheelchair.
- DO NOT operate the powered wheelchair until you have checked that the surroundings are clear and that the area is safe for travel.
- Please pay attention to the environment, and to keep away from the hazard of external flame. When the user is smoking, pay attention to safety and make sure to extinguish the fire when finished. Be alert to the environment when someone nearby is smoking or using a cigarette lighter, keep awayfrom the hazard and use fire-proof cloth.
- DO NOT use parts, accessories or adapters other than those authorized by

KARMA. Before attempting to sit in or exit the power wheelchair, turn the power OFF. This will ensure that the power wheelchair will not drive. Turn the power OFF while the wheelchair is not in use. Otherwise, injury and/or damage to the wheelchair and surrounding property may occur

- DO NOT connect any medical device (i.e., a ventilator, life support machine, et cetera) to the battery. This could cause unexpected failure of the device and the powered wheelchair. KARMA specifically disclaims responsibility to all personal injury and property damage that may occur during use which does not comply with applicable federal, state and local laws and ordinances.
- DO NOT stand on the footplates of the powered wheelchair.
- DO NOT use the wheelchair when the back is folded. This alters the centre of gravity and may cause the wheelchair to tip backwards. The back should only be folded for storage or transport of the wheelchair.
- DO NOT hang anything on the backjoints that could cause the backrest folding suddenly and may cause injury.
- DO NOT be towed by other vehicles (cars, motorcycles or bicycles, etc.). Only use freewheel mode on flat surfaces since your electromagnetic brakes are not engaged in this mode, without these brakes it will roll down a hill causing injury or damage. Never drive under the influence of alcohol or medication.
- **DO NOT** sit in the powered wheelchair within a moving vehicle unless it has been affixed the labels of hook mark.

RAMPS

- DO NOT climb, go up or down ramps or traverse slopes greater than the safe climbing angle for your model specified in section 10.
- When negotiating ramps, if the joystick is released while moving forward, the powered wheelchair will roll backwards approximately one foot before the brake engages. If the joystick is released while in reverse, the powered wheelchair will roll backwards approximately two and a half feet before the brake engages.
- Be sure to reduce your speed when driving on curved roads or making a turn; do not drive at full speed. Please drive at a slower speed so you have complete control of the wheelchair.

ELECTRICAL

- Check to ensure that all electrical connections are secure at all times.
- Grounding Instructions: DO NOT, under any circumstances, cut or remove the round grounding prong from any plug. Some devices are equipped with three-prong (grounding) plugs for protection against possible shock hazards.
- Where a two-prong wall receptacle is encountered, it is the personal responsibility and obligation of the customer to contact a qualified electrician and have the two-prong receptacle replaced with a properly grounded

three-prong wall receptacle/outlet in accordance with the National Electrical Code and local laws.

- Do not use an extension cord when charging your batteries. A risk of fire and /or electric shock could be encountered.

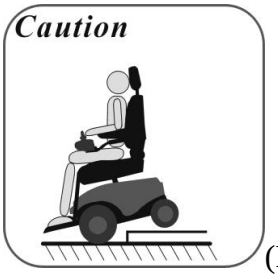
BATTERIES

- The warranty and performance specifications contained in this manual are based on the use of deep cycle sealed lead acid batteries.
- KARMA strongly recommends their use as the power source for this unit. (Refer to Section 6)
- Carefully read the battery and charger information prior to installing, servicing or operating your wheelchair.

RAIN TEST

- KARMA has tested its powered wheelchair in accordance with ISO 7176 Part 9 Rain Test. This test provides the end user or his/her attendant sufficient time to remove his/her powered wheelchair from a rainstorm and retain operation.
- DO NOT leave your powered wheelchair in a rain storm of any kind.
- DO NOT use your powered wheelchair in a shower or leave it in a damp bathroom while taking a shower.
- DO NOT leave your powered wheelchair in a damp area for any length of time. Direct exposure to rain or dampness could cause the powered wheelchair to malfunction electrically and mechanically and may cause the powered wheelchair to prematurely rust.

STAIRWAYS



(Figure 1)

- DO NOT attempt to move an occupied powered wheelchair between floors using a stairway. **(See Figure 1)**
- Use an elevator to move an occupied powered wheelchair between floors. If moving a powered wheelchair between floors by means of a stairway, the occupant MUST be removed and transported independently of the powered wheelchair. Extreme caution is advised when it is necessary to move an UNOCCUPIED powered wheelchair up or down stairs.
- KARMA recommends disassembling the wheelchair and transporting the components independently up or down stairs. Make sure to use ONLY secure, non-detachable parts on each component for hand-hold supports.
- DO NOT attempt to lift a powered wheelchair by any removable (detachable) parts. Lifting by means of removable (detachable) parts may result in injury to the user or assistants or damage to the wheelchair.

ESCALATORS? SORRY!

- DO NOT use an escalator to move a powered wheelchair between floors. Serious bodily injury and damage to the wheelchair may occur.

YOU AND YOUR KARMA SERVICE PROVIDER

- No tools are required for assembly. Your wheelchair should be assembled by your authorized KARMA dealer. Your authorized KARMA dealer is also your service provider. Unauthorized repairs, upgrades and add-ons will void your warranty.
- Anything wheelchair related that requires tools should be done by your authorized KARMA service provider. Your KARMA serviceprovider has the necessary service manual for your wheelchair.
- If you have any defective parts or lose any parts, please contact your dealer for repair and/or replacement. Please only use parts authorized by KARMA. Use of parts that are not authorized by KARMA will void your warranty.
- Part numbers are listed on our bill of materials (explosion drawings), which we give to our authorized dealers and service providers. Customers should order parts through their dealer as well as all repairs and scheduled maintenance.
- Customers should go to their dealership for all service needs to guarantee their warranty is not void. Always go to an authorized service provider. Unauthorized repairs will void your warranty.Procedures other than those described in this manual must be performed by a qualified technician. They also have the service manual with a complete list of maintenance required to keep your KARMA wheelchair in top performance.
- Check the warranty section of this manual to find out what KARMA guarantees and what maintenance and parts you will have to pay for.
- KARMA does not have an official list of service providers at this time. Please contact your dealer for service. If you cannot contact your dealer, please contact another authorized KARMA dealer for service. If all else fails, contact KARMA directly via our website or give us a call and we can refer you to your new service provider.

CLASSIFICATION & INTENDED USE

- KARMA's KP-10.3 Series are classified as a class B mobility product for indoor and outdoor use. This wheelchair is suitable for usersup to 115kg in weight. It also has an extremely durable aluminum alloy frame with tough accessory and does not suffer in dramatic extremes of temperature (neither the user nor the attendant need touch metal parts in normal use).
- Check with your local government as to legislation pertaining to mobility vehicles to assure your legal requirements to drive on public roads have been met, i.e. a pelvic belt, lighting, registration or licensing.

CE MARKING

- This powered wheelchair complies with the requirements of the Medical Devices Directive 93/42/EEC.

⚠ CAUTION

- **Before purchasing and using KARMA wheelchairs, please consult qualified professionals so as to ensure that you choose suitable products and use them correctly as well. For safety reasons, if there is any risk due to the user's movement in the wheelchair or other environmental factors that might cause the wheelchair to tip or the person on the wheelchair to fall off, KARMA recommends that you install anti-tippers, safety belt, or other additional safety accessories.**

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1. PREFACE

1.1 Please carefully read this owner's manual before using the wheelchair. Improper use of the wheelchair could result in harm, injury or traffic accidents. Therefore, for safe and enjoyable use of the wheelchair, please read this owner's manual.

1.2 This owner's manual includes operation instructions for the aspects of the wheelchair, assembly instructions, and instructions on how to deal with possible accidents. This owner's manual is written for KARMA powered wheelchair(s): KP-10.3 Series.

1.3 The symbols used in this manual are explained below. Pay special attention to the parts marked with these symbols.

WARNING	**Improper use could lead the user to severe injury or death.**
CAUTION	**Improper use could lead the user to severe injury and/or damage to your wheelchair.**
SUGGESTION	**Follow these instructions to keep the wheelchair in good condition.**

1.4 This manual includes the repair and maintenance chart as well as the Warranty. Please keep it in a safe place or with the wheelchair.

1.5 If someone else uses the wheelchair, make sure that you give him or her this owner's manual for his or her reference.

1.6 As designs change, some illustrations and pictures in this manual may not correspond to the vehicle that you purchased. We reserve the right to make design modifications without further notice.

2. SAFETY

2.1 Before Driving

2.1.1 The user must be familiar with the use and operation of this wheelchair before driving.

2.1.2 Therefore, please always keep these safety guidelines in mind.

WARNING

- **When prescribing wheelchairs for use by full or partial amputees (above or below knee, single or double) or other conditions that affects the user's natural center of gravity and might cause the wheelchair to tip or the person on the wheelchair to fall off, we suggest contacting your therapist or dealer as well as attaching anti-tippers, safety belt, or other additional safety accessories.**

2.2 Traffic Rules

2.2.1 Pedestrian traffic rules apply to this wheelchair. Please be safe.

2.2.2 Drive only on pedestrian areas such as the sidewalk. Never drive the wheelchair on the highway.

2.2.3 Be aware of other vehicles when crossing all roads.

2.2.4 Be extremely cautious when driving your wheelchair in heavy traffic or the shopping mall.

2.2.5 DO NOT drive your wheelchair when you feel tired or consume alcohol.

2.2.6 Please do not drive your wheelchair at night.

2.2.7 Please follow pedestrian traffic lights.

WARNING

- **When using the wheelchair, ALWAYS follow the Highway Code when outdoors and the guidelines written in this manual.**

2.3 Practice Driving

2.3.1 Before you are familiar with the operation of your wheelchair please practice in a wide and open area, like a park.

2.3.2 To avoid falling off your wheelchair please practice all kinds of driving motions, such as accelerating, stopping, turning, reversing and going up and down ramps.

2.3.3 Please set the speed to medium when you first start practicing.

2.3.4 Be safe. Make sure someone accompanies you in case you need assistance.

2.3.5 Be sure you are able to control and operate your wheelchair easily and confidently before you set the speed up.

2.4 No Passengers

KARMA wheelchair is limited to one driver. Do not carry passengers (including children) on your wheelchair.

2.5 No Hauling Heavy Goods

Do not use this wheelchair to carry or haul heavy goods. The maximum weight that can be carried, including goods, is stated beside "Max. User Weight" in section 10. SPECIFICATIONS.

2.6 Rain

This product is not guaranteed to be water resistant. Please do not drive in the rain, through puddles or spray water to clean this product. (See Figure 2.1)

2.7 While Driving

Please carry out daily inspections. Refer to section 7.1 DAILY CHECK

2.8 General Warning

2.8.1 Do not lean over the side of the wheelchair as such an action may cause you to lose balance and fall.

2.8.2 Use caution to assure your clothing doesn't get tangled with the wheels.

2.9 Railroad Crossing

2.9.1 Before crossing the tracks, please stop completely and look both ways.

2.9.2 Cross the tracks perpendicular to avoid your wheels getting stuck.

2.9.3 Do not drive at full speed over railroad tracks.

2.10 Circumstances to Avoid

2.10.1 Avoid roads with heavy traffic, mud, excessive gravel or bumps, snow and ice. These conditions may damage your wheelchair.

2.10.2 Avoid roads that are too narrow or by a canal/waterway without any fence/hedge.

2.10.3 Also avoid places where your wheels might get stuck, slip or not have traction.

2.10.4 Do not drive in a gale, at night or in rainy/snowy/foggy/misty weather. These conditions may cause your wheelchair to rust.(See Figure 2.2)

2.10.5 Do not drive in a S curve, do doughnuts or make sudden turns.

2.10.6 Do not take an escalator.

2.11 Mobile Phones and Other Electric Equipment

2.11.1 Do not use a mobile phone or other wireless communication devices while driving. (See Section 3. EMI/RFI)

2.11.2 Do not charge the mobile phone or other electric devices from your wheelchair's batteries.

2.12 Ramps, Inclines and Drops

2.12.1 Do not drive onto a steep ramp. Refer to "Max. Climbing Ability" in section 10. SPECIFICATIONS for your wheelchair'smaximum climbing angle.

2.12.2 When climbing up to an inclined road, please set the speed higher than the medium speed and drive carefully. (See Figure 2.3)

2.12.3 When going down an inclined road, set the speed to "1" and never use reverse.

2.12.4 Do not drive on a road with many bumps and holes close to each other, such as potholes or washboard roads. (See Figure 2.4)

2.12.5 Do not make sudden turns when driving on gravel roads or ramps.

2.12.6 The maximum surmountable obstacle height is 5 cm for your wheelchair. Exceeding this obstacle height will damage your wheelchair and void your warranty. (See Figure 2.5)

2.12.7 When negotiating an obstacle slow down, put your seat into the full upright position and approach it head on (perpendicular).

2.12.8 Just before the obstacle, speed up until the entire wheelchair has conquered the obstacle. Negotiating an obstacle at an angle may cause your wheelchair to tip over. Don't do it!

2.12.9 When climbing down a curb, slow down just before you get to it and only speed up after the entire wheelchair has lowered to the road.

2.12.10 Again, descending obstacles should be done perpendicularly. (See Figure 2.6)

2.12.11 KARMA does not design wheelchairs to take jumps over or off obstacles. Doing so will void your warranty.

WARNING

- **Do not set the wheelchair in freewheel mode when on an incline or decline.**
- **If you breakdown on railroad tracks, first, check for an oncoming train. If a train is coming, get out of its way immediately! If no train is coming, set to freewheel mode and push the wheelchair off the tracks.**

2.13 Maximum User Weight Limit

2.13.1 Refer to "Max. User Weight" in section 10. SPECIFICATIONS.

2.13.2 Loads exceeding maximum capacity can damage your wheelchair and cause malfunctions yielding a safety hazard. The warranty does not cover damage caused by improper operation of the wheelchair.

(Figure 2-1)

(Figure 2-2)

(Figure 2-3)

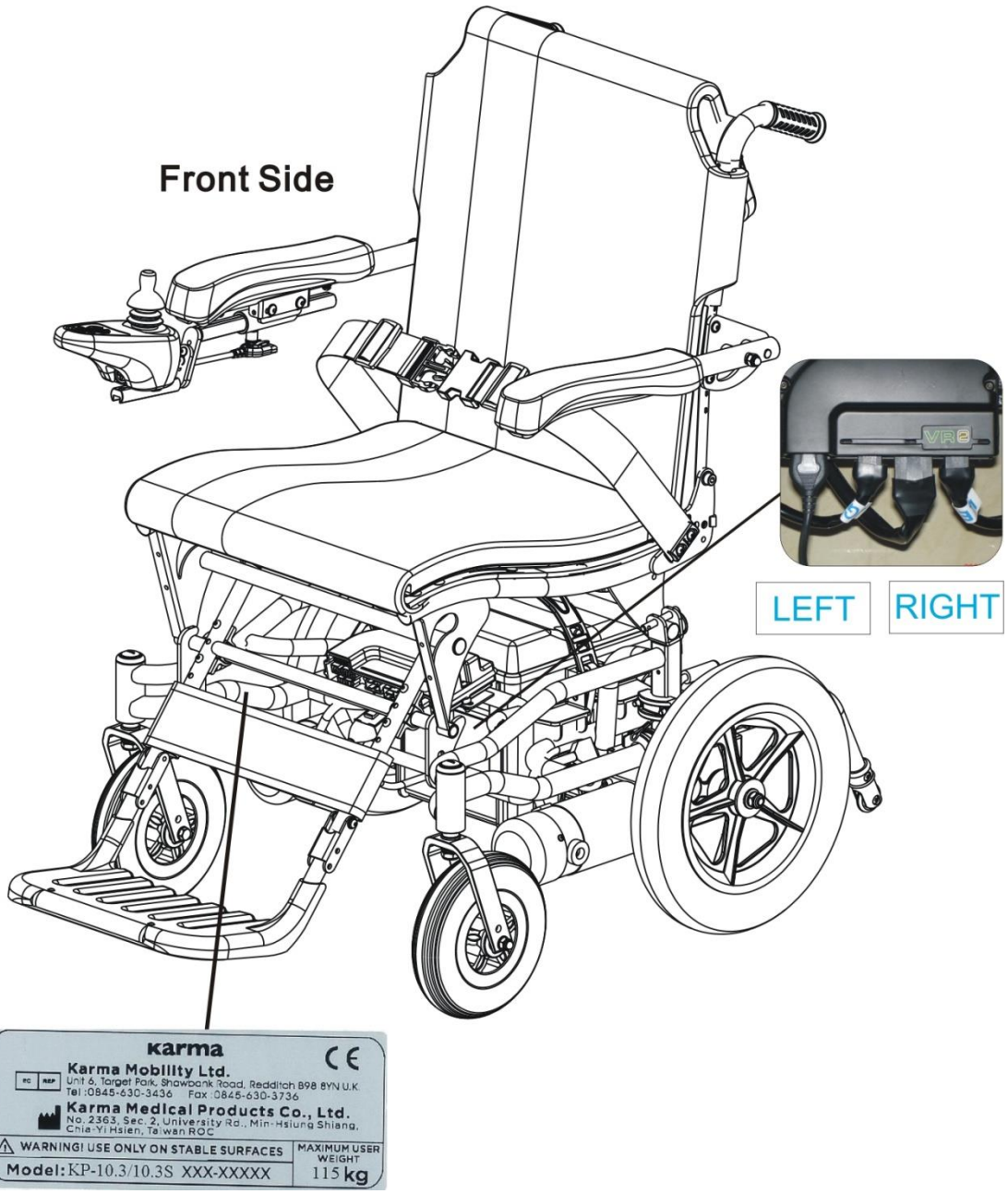
(Figure 2-4)

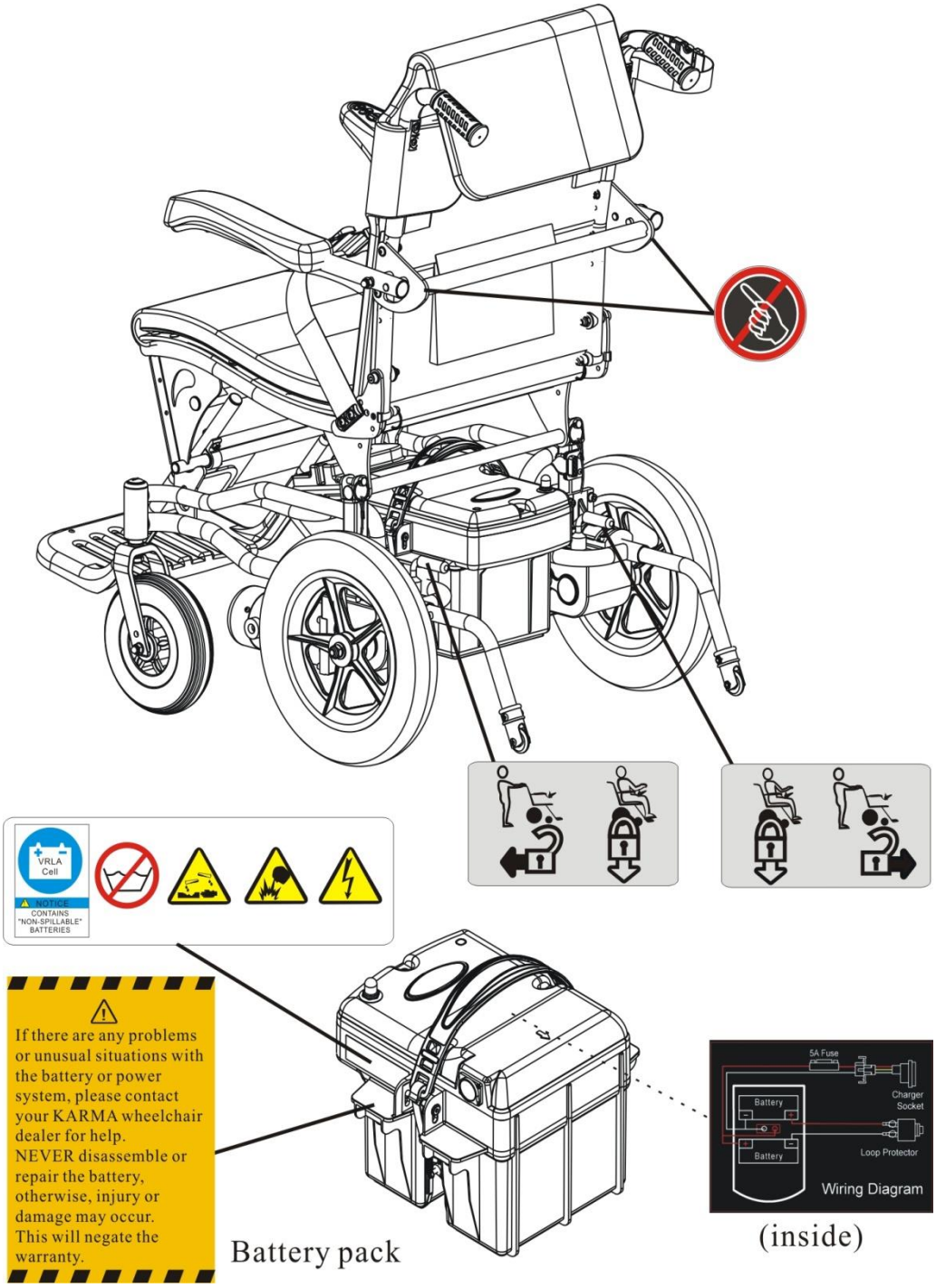
(Figure 2-5)

(Figure 2-6)

2.14 KP-10.3 Labeling

Please carefully read all the labeling on the wheelchair before driving it. Do not remove them. Protect them for future reference.





3. EMI/RFI

This section provides the user with basic information about the problems with EMI, known sources of EMI and protective measures either to reduce the possibility of exposure or to minimize the degree of exposure. This section also shows some conditions in which unexpected or erratic wheelchair movements may occur.

WARNING

●It is very important that you read this information regarding the possible effects of electromagnetic interference on your electric KARMA wheelchair.

3.1 Electromagnetic Interference From Radio Wave Sources

3.1.1 Powered vehicles may be susceptible to electromagnetic interference (EMI), which is interfering electromagnetic energy (EM) emitted from sources such as radio stations (Radio FrequencyInterference), TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones. The interference (from radio wave sources) can cause the powered vehicle to release its brakes, move by itself, or move in unintended directions. It can also permanently damage the powered vehicle's control system. The intensity of the interfering EM energy can be measured in volts per meter (V/m). Each powered vehicle can resist EMI up to a certain intensity. This amount of resistance is called its immunity level. The higher the immunity level, the greater the protection. At this time, current technology is capable of achieving at least a 20 V/m immunity level, which would provide useful protection from the more common sources of radiated EMI. This powered vehicle model, with no further modification, has an immunity level of 20 V/m without any accessories.

3.1.2 There are a number of sources of relatively intense electromagnetic fields in our everyday environment. Some of these sources are obvious and easy to avoid. Others are not apparent and exposure could be unavoidable. However, we believe that by following the warnings listed below, your risk to EMI can be greatly minimized.

3.2 The sources of radiated EMI can be broadly classified into three types.

3.2.1 Hand-held portable transceivers (transmitter-receivers) with the antenna mounted directly on the transmitting unit, such as citizens band (CB) radios, walkie-talkies, security and fire or police transceivers, cellular telephones and other personal communication devices;

NOTE:

Some cellular telephones or similar devices transmit signals while they are ON, even though they are not in use.

3.2.2 Medium-range mobile transceivers used in police cars, fire trucks, ambulances and taxis usually having the antenna mounted on the outside of the vehicle; and

3.2.3 Long-range transmitters and transceivers, such as commercial broadcast transmitters (radio and TV broadcast antenna towers) and amateur (HAM) radios.

NOTE:

Other types of hand-held devices (cordless phones, laptop computers, AM/FM radios, TV sets, CD players, cassette players, and small appliances such as electric shavers and hair dryers, et cetera) so far as we know, are not likely to cause EMI problems.

3.3 Powered Vehicle Electromagnetic Interference (EMI)

3.3.1 Because EM energy rapidly becomes more intense as one moves closer to the transmitting antenna (source), the EM fields from hand-held radio wave sources (transceivers) are of special concern. It is possible to unintentionally bring high levels of EM energy too close to the powered vehicle's control system while using these devices. This can affect your powered vehicle's movement and braking.

3.3.2 Therefore, the warnings listed below are recommended to prevent possible interference with the control system of the powered vehicle.

3.4 Warnings

3.4.1 Electromagnetic interference (EMI) from sources such as radio and TV stations, amateur radio (HAM) transmitters, two-way radios and cellular phones can affect powered vehicles and motorized wheelchairs.

3.4.2 Following the warnings listed below should reduce the chance of unintended brake release or powered vehicle movementwhich could result in serious injury.

3.4.2.1 Do not operate hand-held transceivers-receivers such as citizens band

(CB) radios or turn ON personal communication devices such as cellular phones, while the powered vehicle is turned ON.

3.4.1.2 Be aware of nearby transmitters, such as radio or TV stations, and try to stay away from them.

3.4.1.3 If unintended movement or brake release occurs, turn the powered vehicle OFF as soon as it is safe.

WARNING

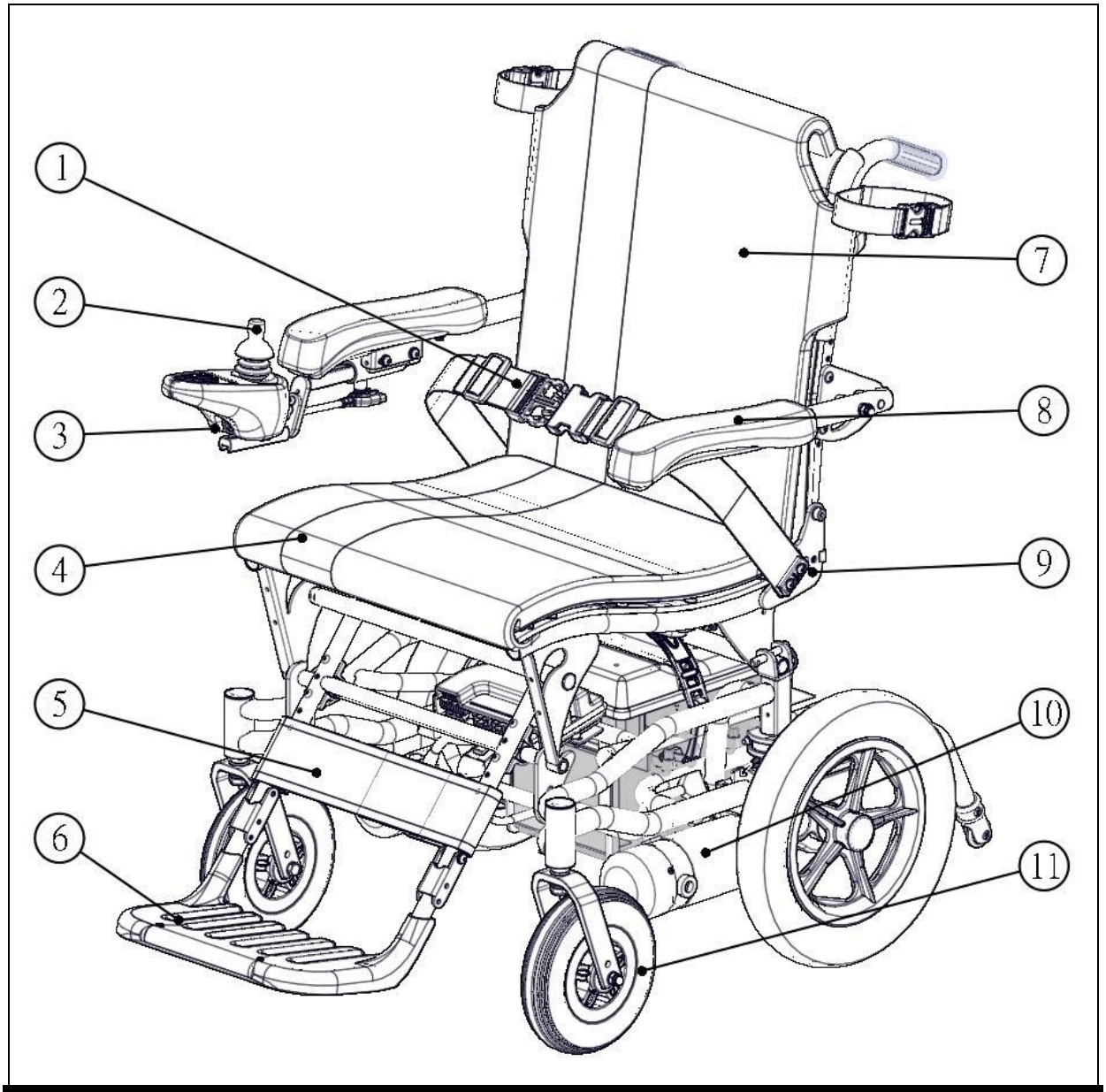
- **Some stores may have automatic (sensor) doors and alarm systems set at certain frequencies that might affect your powered wheelchair.**

3.4.3 Be aware that adding accessories/components or modifying the powered vehicle may make it more susceptible to EMI. There is no easy way to evaluate their effect on the overall immunity of the powered vehicle.

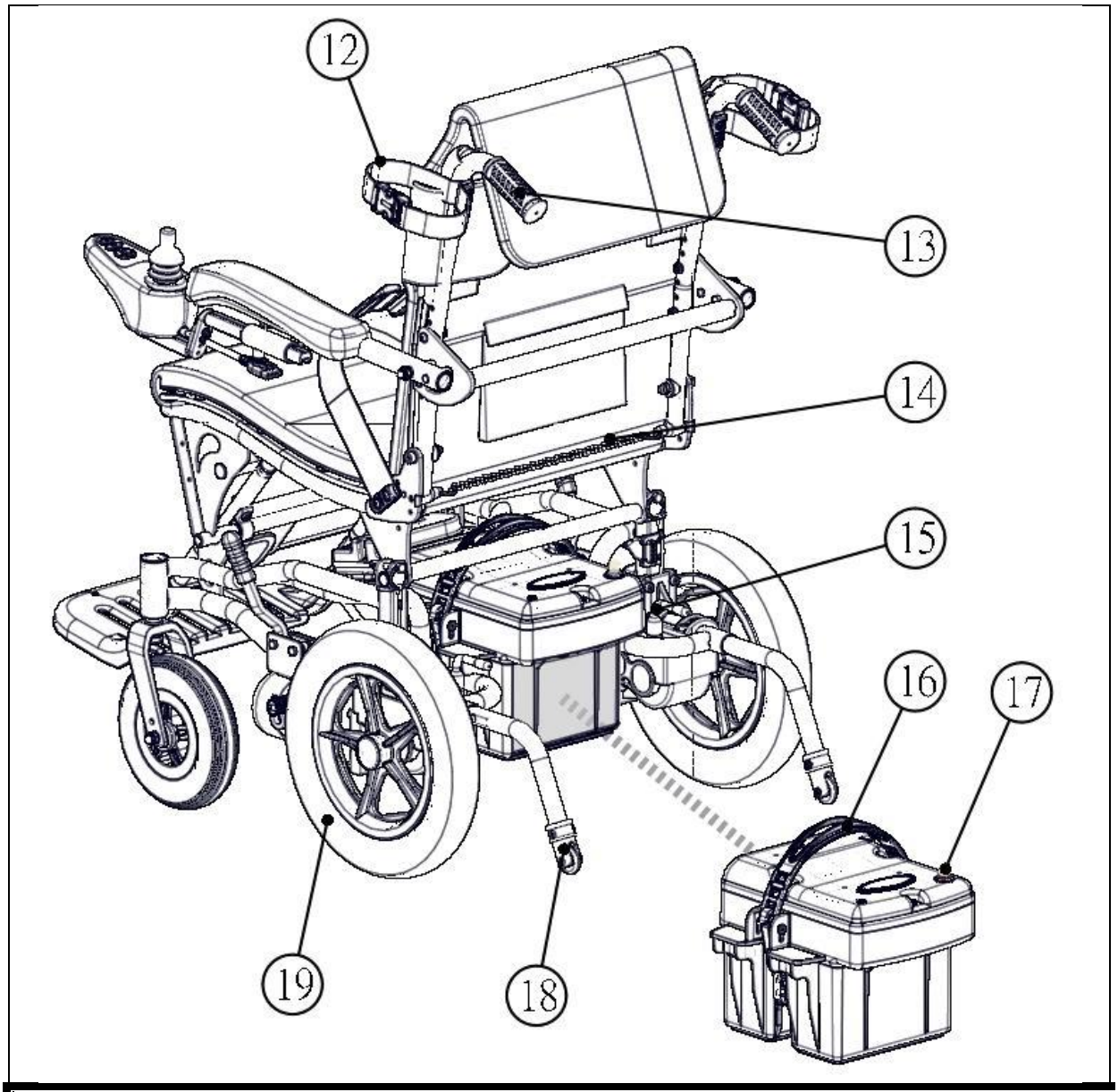
3.4.4 Report all incidents of unintended movement or brake release to your powered vehicle dealer or KARMA, and note whether there was a source of EMI nearby.

4. PARTS

KP-10.3 Parts Introduction

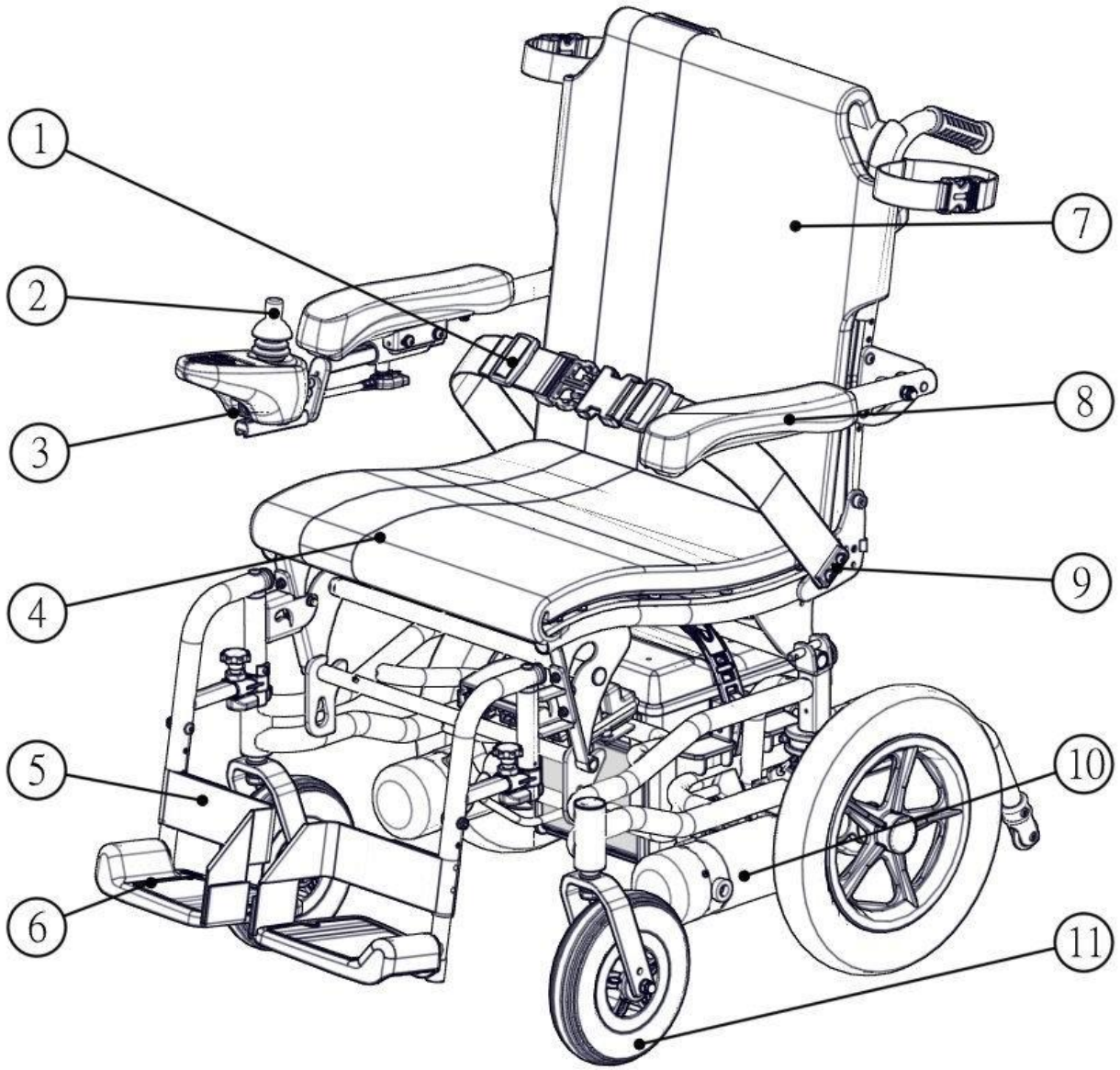


1. Pelvic Belt
2. Joystick Controller
3. Charging Socket
4. Seat
5. Calf Strap
6. Footplate
7. Backrest
8. Armrest
9. Backrest Angle Adjustment
10. Motor
11. Caster

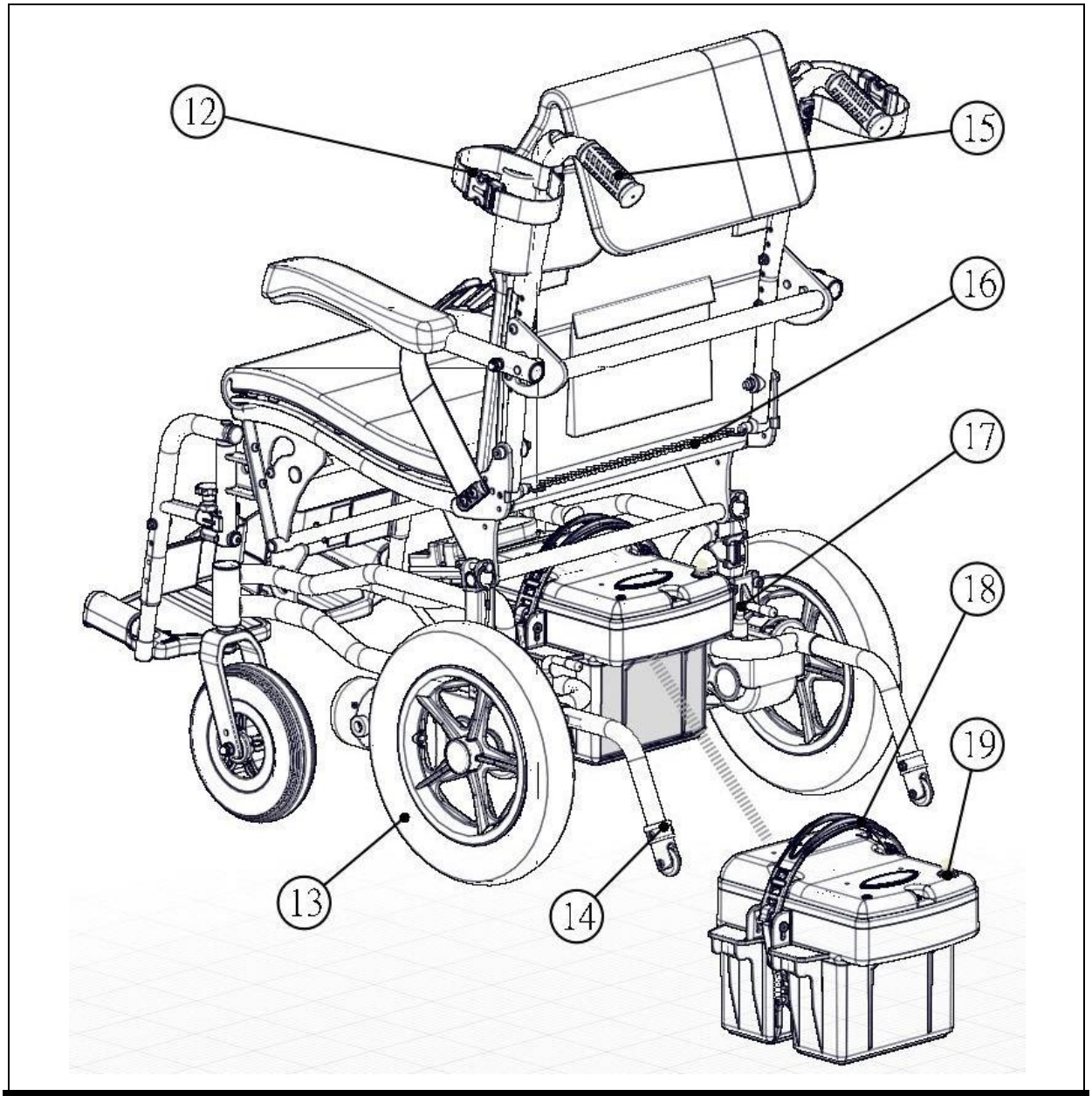


12. Armrest Fixing Strap
13. Push Handle
14. Backrest Angle Adjustment Chain
15. Freewheel Lever
16. Battery Pack's Strap
17. Circuit Breaker
18. Anti-Tipper
19. Rear Wheel

KP-10.3S (equipped with 22Ah batteries) Parts Introduction

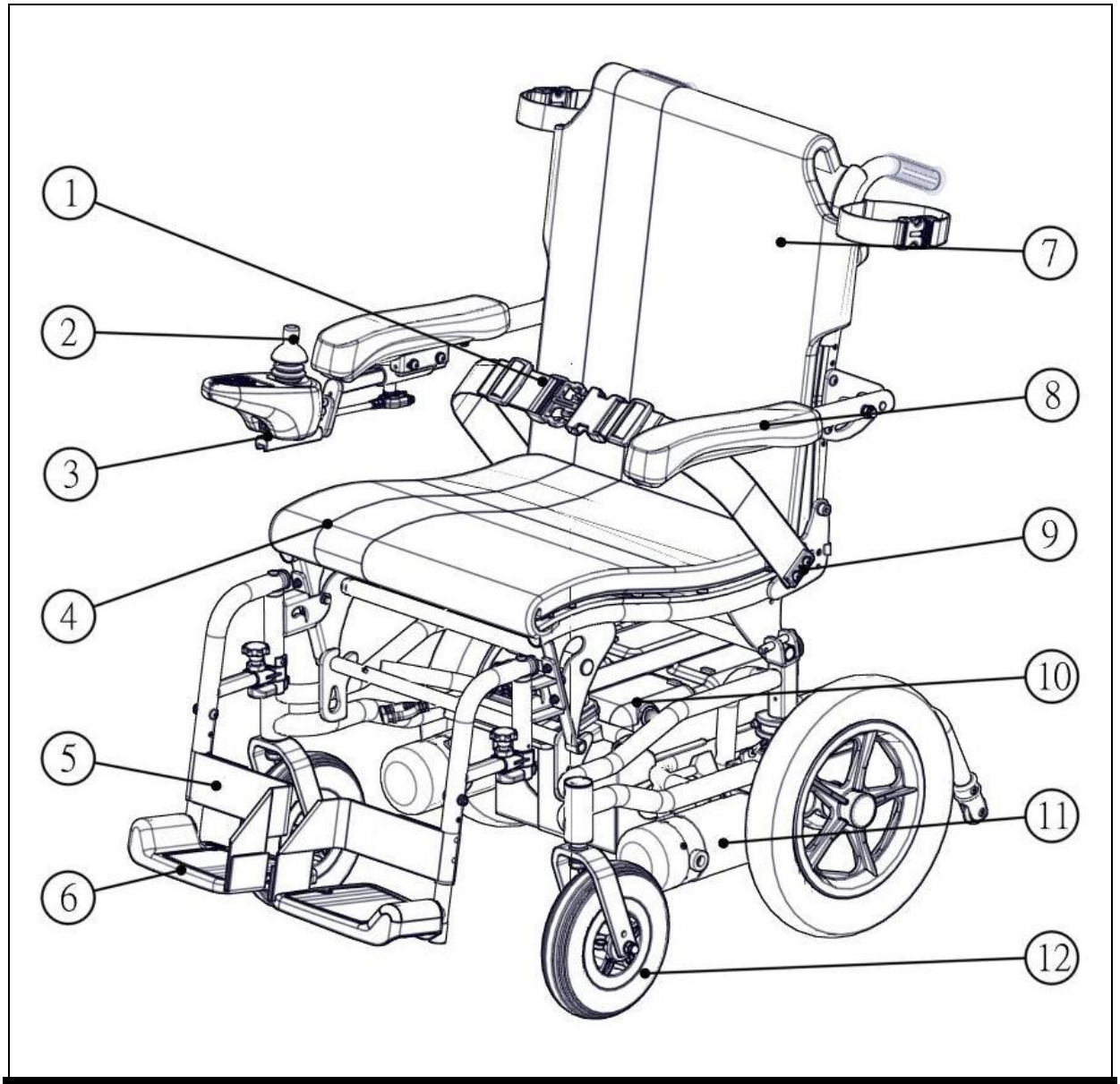


1. Pelvic Belt
2. Joystick Controller
3. Charging Socket
4. Seat
5. Heel Loop
6. Footplate
7. Backrest
8. Armrest
9. Backrest Angle Adjustment
10. Motor
11. Caster

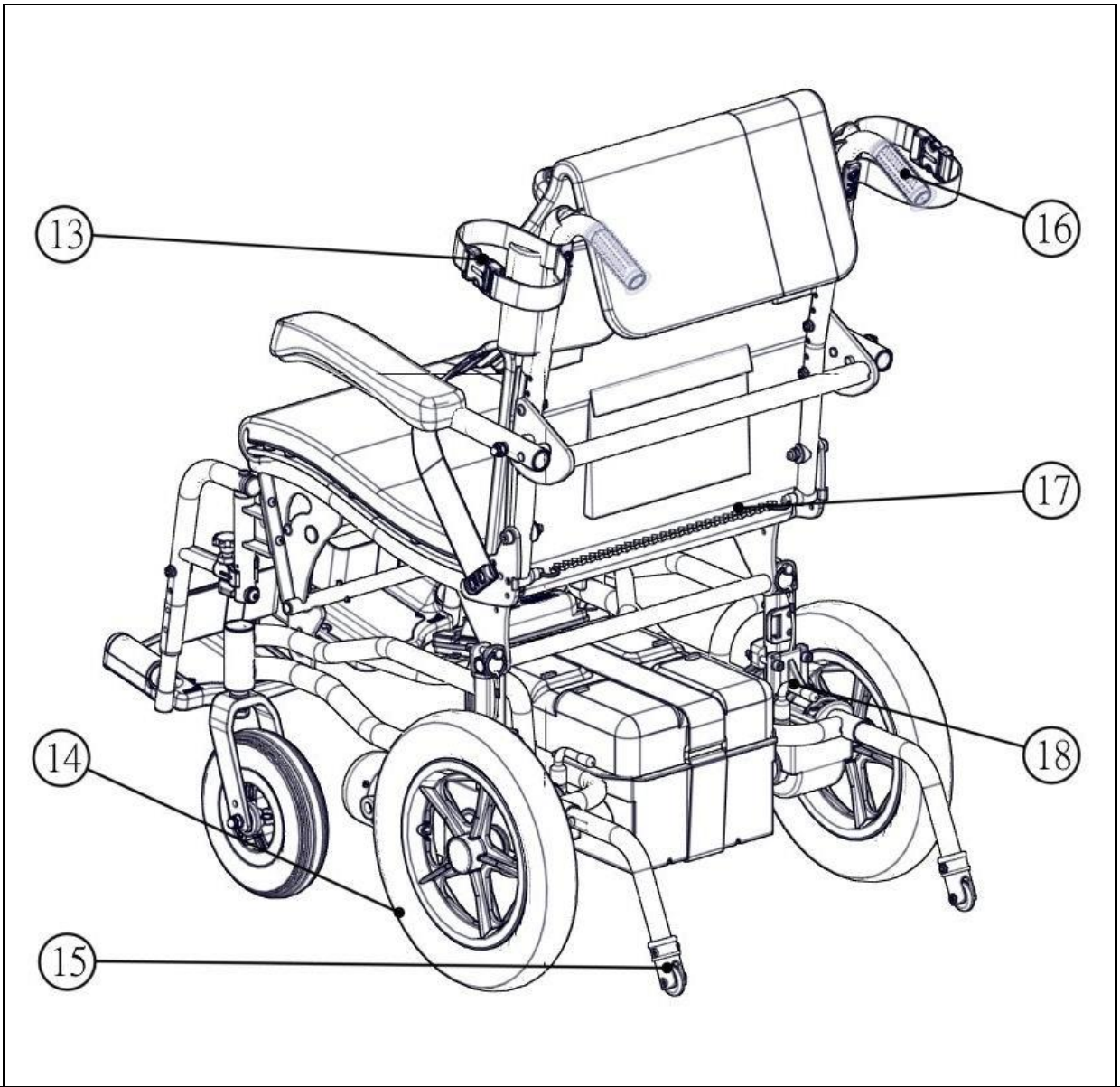


12. Armrest Fixing Strap
13. Rear Wheel
14. Anti-Tipper
15. Push Handle
16. Backrest Angle Adjustment Chain
17. Freewheel Lever
18. Battery Pack's Strap
19. Circuit Breaker

KP-10.3S (equipped with 36Ah batteries) Parts Introduction



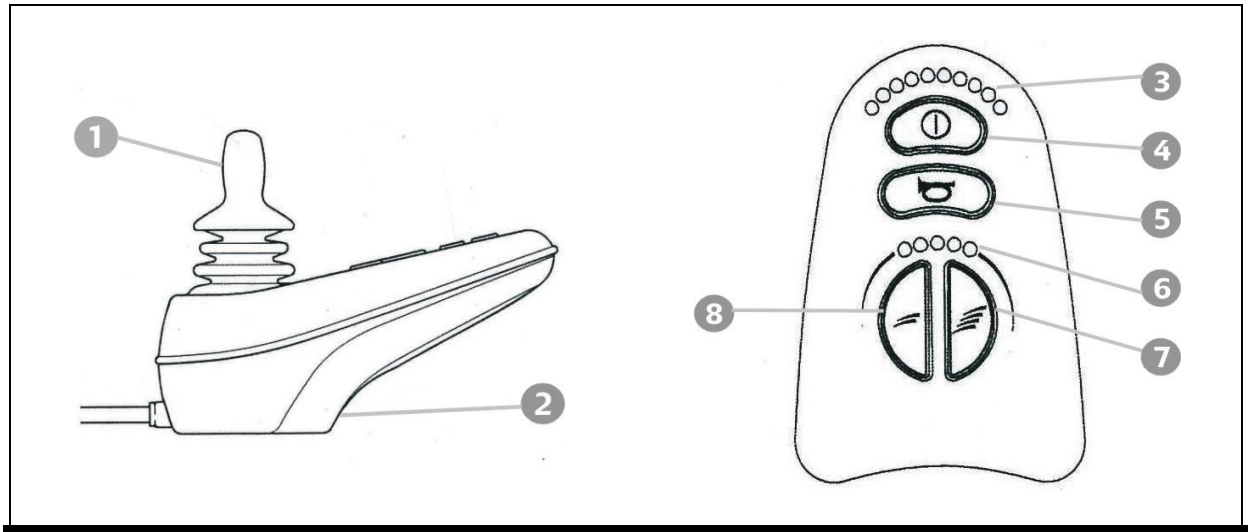
1. Pelvic Belt
2. Joystick Controller
3. Charging Socket
4. Seat
5. Heel Loop
6. Footplate
7. Backrest
8. Armrest
9. Backrest Angle Adjustment
10. Circuit Breaker
11. Motor
12. Caster



13. Armrest Fixing Strap
14. Rear Wheel
15. Anti-Tipper
16. Push Handle
17. Backrest Angle Adjustment Chain
18. Freewheel Lever

5. OPERATION

VR II Joystick Controller



1. Joystick	5. Horn Button
2. Charging Socket	6. Speed Indicator
3. Battery & Diagnostics Indicator	7. Speed Increase Button
4. Power On/Off	8. Speed Decrease Button

5.1 How to Operate Your Wheelchair

5.1.1 POWER ON/OFF

5.1.1.1 Press the power button. Be sure not to touch the joystick while turning on the controller.

5.1.1.2 Your battery & diagnostics indicator should light up.

5.1.2 Speed Adjustment Buttons

5.1.2.1 The speed adjustment buttons allows you to set various forward and reverse speeds.

5.1.2.2 The settings are a percentage of maximum power. Notice the orange dots on the speed indicator. The more orange dots, the faster your speed.

5.1.3 Locking / Unlocking the Wheelchair

The VR2 control system can be locked to prevent unauthorized use. The locking method is via a sequence of key presses and joystick movements, as detailed below.

5.1.3.1 To lock the wheelchair

5.1.3.1.1 While the control system is switched on, depress and hold the on/off button.

5.1.3.1.2 *After 1 second the control system will beep. Now release the on/off button.

5.1.3.1.3 Deflect the joystick forwards until the control system beeps.

5.1.3.1.4 Deflect the joystick in reverse until the control system beeps.

5.1.3.1.5 Release the joystick, there will be a long beep.

5.1.3.1.6 The wheelchair is now locked.

5.1.3.2 To unlock the wheelchair

5.1.3.2.1 Use the on/off button to switch the control system on. The maximum speed / profile indicator will be rippling up and down.

5.1.3.2.2 Deflect the joystick forwards until the control system beeps.

5.1.3.2.3 Deflect the joystick in reverse until the control system beeps.

5.1.3.2.4 Release the joystick, there will be a long beep.

5.1.3.2.5 The wheelchair is now unlocked.

5.2 Controller Cable Fastening Position

5.2.1 The controller for KP-10.3 Series is packaged in the carton; after opening the carton, the controller needs to be put into the position with fastening the cable tie.

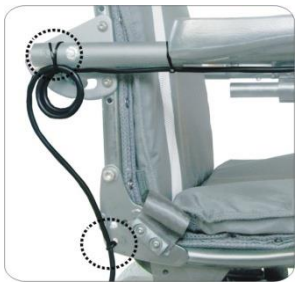
5.2.2 Please follow the following steps

5.2.2.1 Please fasten the bolt of controller fixing bar first. The circles show the position to tie up the cable tie. **(see figure 5-1)**

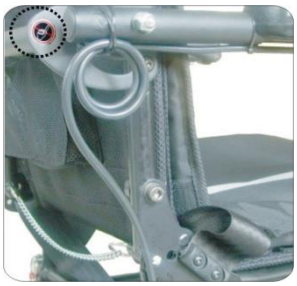
5.2.2.2 The circles show the position to tie up the cable tie and controller cable. **(see figure 5-2)**

5.2.2.3 The circle mark is the position to attach the warning sticker for preventing from clamping finger. **(see figure 5-3)**

(Figure 5-1)



(Figure 5-2)



(Figure 5-3)

5.3 Driving Speed

You can choose between 1 to 5 orange dots in the speed indicator, with 5 being the maximum speed. Please refer to "Max. Speed" in section 10. SPECIFICATIONS.

Speed Scale	Speed Equivalencies and Recommended Circumstances
1-2	Speed equivalent to walking slowly on foot On an decline Driving indoors or in a narrow space
3-4	Equivalent to walking at a normal speed Driving outdoors on flat ground
5	Speed equivalent to a brisk walk Driving in an open space On an incline

WARNING

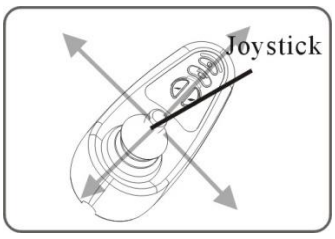
- **Please slow down before you get used to control your powered wheelchair.**
- **Please slow down your speed when indoor.**

5.4 Forward, Reverse and Braking

5.4.1 Release the joystick and the electromagnetic brake will stop the vehicle

5.4.2 Come to a complete stop before turning the power OFF.

5.4.3 Push forward on the joystick to make the wheelchair move forward. (See the figure at the right)



5.4.4 Pull back on the joystick for the wheelchair to move backward.

5.4.5 Release the joystick and the wheelchair will quickly slow down, the electromagnetic brake will be activated to stop the wheelchair.

5.4.7 Come to a complete stop before turning the power OFF.

WARNING

- **The stopping distance will vary with your forward/reverse speed. Therefore, please gradually slow down and come toa complete stop well before any obstacles or danger.**
- **To park the wheelchair, be sure to park on flat ground and then turn the**

power to OFF.
- **NEVER use the freewheel mode when going down an incline. The electromagnetic brake won't function in freewheel mode.**

5.5 Horn Button

The horn will sound for as long as the button is pressed.

5.6 Battery Gauge

When the Battery Gauge is used to indicate power on and provides an estimate of the remaining battery capacity. Any green LEDs lit indicate well-charged batteries. If only amber and red LEDs are lit, the batteries are moderately charged. Recharge before undertaking a long trip. If only red LEDs are lit, the batteries are running out of charge. Recharge as soon as possible.

SUGGESTION

- **It is recommended that you charge the batteries immediately when the battery indicator shows only three or less red lines.**
- **After charging or replacing new batteries, drive the wheelchair for 2-3 minutes to make sure the batteries are fully charged before going on a long journey.**
- **In wintertime, the batteries may respond slowly and the drive range may also be reduced. You must store your wheelchair indoors above freezing temperatures.**
- **When driving on an incline, the battery indicator light might move up and down. This is normal.**
- **Even if the batteries are used properly their capacity will decay over time, thereby reducing the drive range (maximum distance traveled per full charge). Thus, when the drive range becomes about 50% of what brand new batteries would offer, it's time to replace them with new batteries. Otherwise, the batteries may die unexpectedly leaving you in a possibly precarious situation.**
- **The drive range will be shortened when driving frequently on slopes or uneven ground, as this consumes more battery power.**

5.7 Freewheel Levers

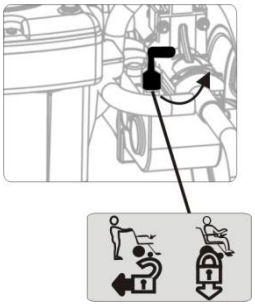
5.7.1 The is supplied with a freewheel device to allow for manual pushing of the powered wheelchair if required.

5.7.2 To select neutral from the engaged position:

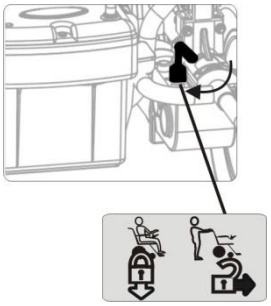
Rotate the two levers located on the top of both motors, 90 degrees outward. The wheelchair will now roll freely. (see figure 5-4)

5.7.3 To engage the motors from the neutral position:

Simply rotate the levers 90 degrees inward. (see figure 5-5)



(Figure5-4)



(Figure5-5)

WARNING

- **Always ensure that the freewheel levers are engaged before using the wheelchair. (i.e. Before turning on the controller)**

CAUTION:

- **Make sure that when the freewheel levers are released (the chair is in freewheel mode), there is an attendant for help.**
- **Always adjust the freewheel levers on flat ground. DO NOT release it on a slope (the chair is in freewheel mode) to prevent the chair from moving and causing danger.**

5.8 How to Adjust Your wheelchair, Disassemble and Assemble Your wheelchair

5.8.1 Footrest Adjustment for KP-10.3

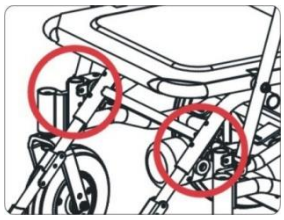
5.8.1.1 The footrest assembly can fold up and be adjusted.

5.8.1.2 Your footplate length should be adjusted according to your calf length.

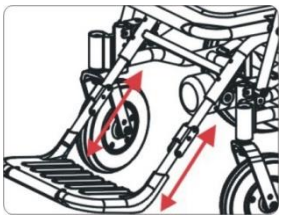
5.8.1.3 Go to your service provider for adjustment or use the Allen Wrench included in your KARMA Tool Kit to loosen the bolts at both side of the footplate, adjust and re-tighten.

5.8.1.4 There are three holes in the inner frame that the lower bolt of the outer frame will go through to secure the appropriate footrest height. (See Figures 5-6~5-7) The three staged adjustment can be made in increments of 2 cm.

5.8.1.5 If you do not want use the footplate. You can fold up and put the footplate under the seat.(See figure 5-8~5-10)



(Figure 5-6)



(Figure 5-7)

(Figure 5-8)

(Figure 5-9)

(Figure 5-10)

5.8.2 Footrest Adjustment for KP-10.3S

5.8.2.1 The calf length can be adjusted by changing the footplate height. The adjustment is in increments of 2.5 cm (4 positions).

5.8.2.2 Your footplate length should be adjusted according to your calf length.

5.8.2.3 Use the Allen Wrench included in your KARMA Tool Kit to loosen the bolts at both side of the footplate, adjust and re-tighten. (see figure 5-11 and 5-12)

(Figure 5-11)

(Figure 5-12)

(Figure 5-13)

(Figure 5-14)

(Figure 5-15)

5.8.2.3 To detach the footrest, please follow below instructions.

5.8.2.4 Pull up the star knob under the seat. (see figure 5-13)

5.8.2.5 Swing the footrest outward. (see figure 5-14)

5.8.2.6 Lift the footrest up to detach it. (see figure 5-15)

5.8.2.6 Follow the above instructions to detach the footrest at the other side.

5.9 Armrest Adjustment for KP-10.3 Series

5.9.1 Height adjustments (4 stages of height adjustment)：

Remove the bolts from the armrest fitting tube, adjust to the desired height and tighten the bolts securely. (see figure 5-16)

5.9.2 Swing backwards：

To make side transfers easy, the chair is equipped with swing away armrests. Lift and swing backwards to remove. (see figure 5-17)

(Figure 5-16)

(Figure 5-17)

(Figure 5-18)

5.10 Backrest Adjustment for KP-10.3 Series

There are two angles for the seat. You don't need any tools. You can adjust it by adjustment rod on the side of seat. Pull the backrest angle adjustment chain and adjust the backrest to the optimum angle. (see figures 5-18)

5.11 Disassembling and Assembling the KP-10.3 Series

5.11.1 Disassembling and Assembling KP-10.3

The KP-10.3 can be disassembled into three parts easily and can also be quickly assembled which is convenient for storage and transportation. Please follow the following steps.

1. Fold the footrest upward.

2. Flip back both the armrest, and buckle up the straps.

3. Pull the chain behind the seat.

4. Fold the backrest forwards and press it.

5. Remove the cable from the transmission connector.

6. Pull the pins out from both sides of the mounting bases.

●Assemble the KP-10.3 by reversing this procedure.

7. Pull the seat forward and upward to lift it.

8. Hold onto the battery pack's strap and lift it up.

WARNING

●The heaviest component is base which weighs 24 kg.
●Please be careful about hands' injury when assembling and disassembling.
●Always use the anti-tippers on your wheelchair to prevent injury.

5.12.2 Disassembling and Assembling KP-10.3S

The KP-10.3S can be disassembled into three parts easily and can also be quickly assembled which is convenient for storage and transportation. Please follow the following steps.

1. Detach the footrests.

2. Flip back both the armrest, and buckle up the straps.

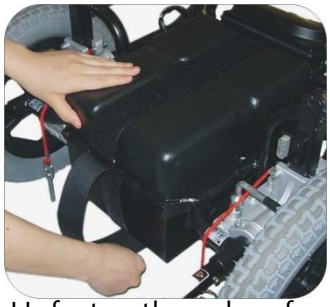
3. Pull the chain behindthe seat.

4. Fold the backrest forwards and press it.

5. Remove the cable from the transmission connector.

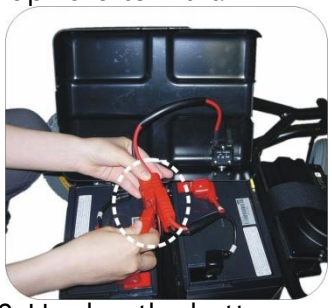
6. Pull the pins out from both sides of the mounting bases.

7. Pull the seat forward and upward to lift it.

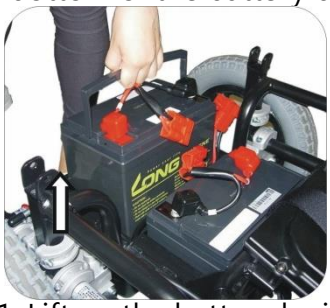


8. Unfasten the velcro from the bottom of the battery box.

9. Open the battery box cover to the left.



10. Unplug the battery.



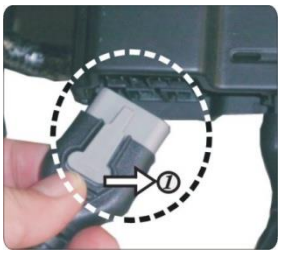
11. Lift up the battery by its handle.

12. After removing the batteries, close the battery box cover.

- When your KP-10.3S is equipped with 22Ah batteries, to remove the batteries, simply hold onto the battery pack's strap and lift it up. (as shown in the step No. 8 in section 5.11.1 Disassembling and Assembling KP-10.3)
- Assemble the KP-10.3S by reversing this procedure.
- Battery plugs are placed in the gap between the two batteries, as shown in the left figure.

⚠ CAUTION

- **Make sure that the brake are engaged to prevent the chair from sliding during assembly and disassembly.**
- **The seat of KP-10.3S can be locked when assembly. Do not over-force when folding and unfolding. It might cause injury or damage the wheelchair structure.**
- **The battery weighs about 12 kg, make sure that you have sufficient strengh to lift it up.**
- **To unplug the controller wire (see the figure at the right), press down the front side of the plug. Then pull it back to detach it. When plugging it, note that the front of the plug should face inward of the wheelchair (as the the same direction as it faces when it is still plugged) and plug it in. The direction of the plug should be maintained. Otherwise, it might damage the plug, and such damage is not covered by the warranty.**



5.12 Anti-Tippers

The main purpose of anti-tippers is to prevent the user from turning over.

5.12.1 The release pin should be protrudent once you have installed the anti-tippers. Please try to pull forward and backward to check if the anti-tippers are immovable

⚠ CAUTION

- **If the anti-tip tubes are not fitted, or have been fitted incorrectly, there is a risk of tipping over and of injury.**

5.13 Getting In and Out

5.13.1 The freewheel levers are above the motors in the back of the wheelchair. Note that they shold be engaged when the user gets in and out of the wheelchair to prevent if from sliding.

5.13.2 Flip up the footplate when getting in and out. It can prevent the chair

from tipping to the front and make transferring easier.

5.13.3 Make sure that the controller is turned off.

CAUTION

- **Always ensure that the front casters are in line with the rear wheels and pointing forwards and that the back of the chair is secure either against a wall or firmly held by an attendant.**

5.14 Getting In

5.14.1 Engage the freewheel levers and make sure that the controller is turned off.

5.14.2 Turn up the foot plates and swing footrest to the side.

5.14.3 The user should now lower themselves into the seat using the armrests as supports.

5.14.4 Turn the foot plates back down and re-locate the footrests so that the user can place his feet upon them.

5.15 Getting Out

5.15.1 Make sure that the chair is as close as possible to your transfer point.

5.15.2 Back the chair sufficiently to ensure that the casters are pointing forward i.e. in line with the rear wheels and usually with the caster forks pointing forward. Ensure that where possible the rear of the chair is against a wall or, if not, it must be firmly held by an attendant.

5.15.3 Engage the freewheel levers and make sure that the controller is turned off.

5.15.4 Turn up the foot plates and swing the footrests to the side.

5.15.5 Slide forwards on the seat.

5.15.6 Place one foot firmly on the ground with the knee at a right angle and the other foot slightly apart and further back.

5.15.7 Place your hands on the front of the armrests and moving your weight forward, bring your head and shoulders up over your knees as you push yourself up.

⚠ CAUTION

- **Never stand on the footplates when getting into or out of the chair.**
- **Always ensure that the front casters are in line with the rear wheels and pointing forwards and that the back of the chair is secure either against a wall or firmly held by an attendant.**

6. BATTERIES AND CHARGER

6.1 Battery Box of 22 Ah batteries in KP-10.3 Series

There are two batteries that are connected and put below the wheelchair within the battery box of KP-10 series.This battery boxes are designed professionally, can disassemble and combine fast. When the wheelchair is disassembled, remove the seat first. Hold onto the battery pack's strap and lift it up. It can be in accordance with going on against the step to put the battery. (See Figures 6.1 ~ 6.3)

1. Put the battery box single-handed and vertically. (Figure 6-1)

2. Notice that the battery box can't bump against the pole. (Figure 6-2)

3. Please check the tight between the battery box and frame. (Figure 6-3)

⃠ WARNING

- **Please read the owner's manual that is included with the charger that came with your powered wheelchair. The information in the original manufacturer's owner's manual supersedes anyinformation given in this chapter since the charger included withour products may change from time to time.**

6.2 Charging the Batteries

6.2.1 Charge your batteries if any of the following conditions occur.

6.2.1.1. If you have used your wheelchair for more than an hour continuously.

6.2.1.2. You've used more than one quarter of the total charge.

6.2.1.3. When you haven't used the wheelchair for more than two weeks.

6.2.1.4. If the current charge is not enough to reach your final destination.

6.2.2 Be sure to follow the procedures listed below precisely.

6.2.2.1 Turn the wheelchair OFF.

6.2.2.2 Connect the charger's cord to a power outlet.

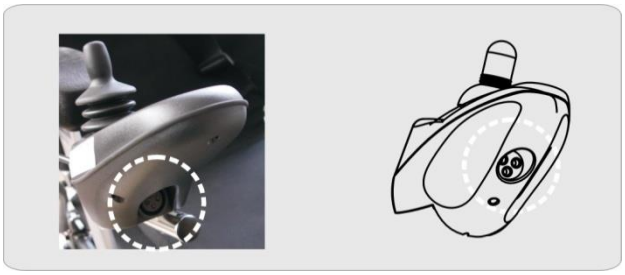
6.2.2.3 Locate the charging socket at the front of the joystick housing. Then connect the charger's round plug to the charging socket. (see figures 6-4 and 6-5)

6.2.2.4 The charger's red/orange LED will light up as soon as the charging starts.

6.2.2.5 The charging time is at least 8 hours, but it could be as long as 12 hours, depending on the status of the batteries and temperature. The charging time is 16 hours in maximum.

62.2.6 The orange LED will change to green when the charging is completed.

6.2.2.7 Disconnect the cord and pull out the round plug from the charging socket.



(Figure 6-4)

(Figure 6-5)

SUGGESTION

- **Do not disconnect the charger cord if the charging is not completed. The battery life will be seriously shortened or decayed if the batteries are repeatedly used without being fully charged. Therefore, be sure to always charge the batteries fully.**
- **Always complete the charging by letting the charge LED light turn green. NEVER stop charging before it is complete.**
- **When finished charging, disconnect the charger plug from the charging socket as soon as possible. Even when the charger is turned OFF, the electric power will slowly discharge if the cord is not disconnected. DO NOT leave the charger ON connected to the wheelchair for more than 16 hours.**
- **Charging time depends on the surrounding temperature; it takes longer in the winter.**

CAUTION

- **Please follow the guidelines below to avoid accidents while charging.**
- **Be sure to only use a KARMA approved battery charger and charge the battery completely every time. The battery can be damaged if a non-genuine charger is used.**
- **Never disassemble or modify the charger. This will void the warranty.**
- **Please charge in a well-ventilated area where the battery is not directly exposed to sunlight. Do not charge the battery under rainfall, in morning dew or in an area where the humidity is high.**
- **Do not cover the wheelchair with any waterproof cloth or other objects while charging. Don't charge in temperatures less than -10℃ (14°F) or higher than 50℃ (122°F) as the charger may not work well and the battery may become damaged.**
- **The charger is not guaranteed to be water resistant.**
- **Valve Regulated Lead-Acid batteries do not have a memory function like cell phone batteries have. Please get in the habit of recharging your VRLA batteries frequently.**
- **New batteries MUST be fully charged prior to initial use of the powered wheelchair.**
- **Always charge new batteries before initial use or battery life will be reduced.**
- **As a general rule, recharge batteries as frequently as possible to assure the longest possible life and to minimize required charging time. Plan to recharge them when use of the powered wheelchair is not anticipated.**

WARNING

- **Keep your wheelchair away from flammable objects while charging, as it may lead to fire or explosion of the battery.**
- **Since the battery may produce hydrogen, do not smoke while charging and charge in a well-ventilated area.**
- **Never connect or disconnect the plug (cord) with wet hands or if the plug (cord) is wet to avoid possible electric shock.**
- **Never attempt to recharge the batteries by attaching cables directly to the battery terminals or clamps. DO NOT jump start your wheelchair!**
- **DO NOT attempt to recharge the batteries while the powered wheelchair is in operation.**

6.3 Charger

6.3.1 The charger's red/orange LED will be ON during charging.

6.3.2 The red/orange LED will turn green when the charging is completed.

6.4 Batteries

6.4.1 Charging or storing the vehicle. Exceeding the specified temperature

range can lead to either freezing or overheating of the batteries.

6.4.2 This will damage the batteries and shorten their lives.

6.4.3 The batteries used on your wheelchair are maintenance free sealed lead acid batteries. Thus, it is not necessary to change or refill the battery liquid.

CAUTION

- **Place the powered wheelchair in a well-ventilated area where work can be performed without risking damage to carpeting or floor covering.**
- **Failure to use the correct battery size and/or voltage may cause damage to the powered wheelchair and give unsatisfactory performance. For replacement of batteries, please contact your local KARMA supplier/dealer in order to ensure that the new batteries are correctly be used.**

WARNING

- **Do not open the battery seal cap at any time.**
- **After ANY adjustments, repair or service and BEFORE use, make sure that all hardware is tightened securely. Otherwise, injury or damage may occur.**
- **When removing/installing batteries, keep all foreign objects, especially metal, away from battery terminals.**
- **There are many risks involved with improper disposal of batteries, whether damaged or not. atteries may contain heavy metals and be considered hazardous waste. Many regions around the world now strictly enforce laws to help protect our environment. By not disposing of batteries properly, you may be liable for fines from your local through national government.**
- **By not recycling batteries, they end up in landfills that are already low on space. From these land fills, lead and other chemicals may leach into streams and rivers destroying ecosystems and poisoning local water resources.**
- **Improper disposal of batteries may also cause injury to unsuspecting others that come in contact with them. If you come in contact with fluids or corroded powder from a battery, rinse with water and contact a physician if necessary. If contact with eyes occurs, rinse for 15 minutes and then visit a physician.**
- **Incinerating or burning a battery will cause it to explode! Please see the end of Section 11. Cleaning & Recycling for more information.**
- **Do not use an extension cord when charging your batteries.**
- **A risk of fire and /or electric shock could be encountered.**

7. INSPECTION AND MAINTENANCE

7.1 Daily Check

Check the following items before driving. If you find anything abnormal, visit your KARMA wheelchair dealer for further inspection before using it.

Item	Inspection Content
Joystick Controller	Is the joystick loose and/or making noise? Can the joystick be turned left and right smoothly? Can the speed buttons be adjusted freely and do they function well? Does the wheelchair stop when the joystick is released completely? Does it light up when the power is ON? Is there enough power for your trip? Does the horn work well?
Motor	Is there any abnormal noise? Does the electromagnetic brake work properly?
Freewheel Mode	Do the freewheel levers work properly?
Driver's Seat	Do the seat angle adjustment knobs (or buttons) work properly? Does the surface of the seat remain or break?

WARNING

- **Visit a KARMA wheelchair dealer for inspection and maintenance if you find anything abnormal.**

7.2 Regular Maintenance Record

To make sure your wheelchair is in good condition, visit your KARMA wheelchair dealer regularly for maintenance(and keep records accordingly) every six months after purchasing. A maintenance/service fee may apply.

SUGGESTION

- **Even if you don't use the wheelchair for a long time, the wheelchair should still be maintained regularly.**
- **You should clean your wheelchair, inside and out, regularly to keep it clean and safe.**

I - Inspection A - Adjustment △ - Repair

3 - Replacement T - Tightening L - Add Oil

Item/Period		1 mth	6 mth	12 mth	18 mth	24 mth	30 mth
Joystick Control Unit			I	I	I	I/3	I/3
Power Module			I	I	I	I/3	I/3
Controller Buttons			I	I	I	I/3	I/3
Connection to the Electrical System				I		I	I/A
Motor	Operation and Noise		I	I	I/A	I/A	I/3
	Electromagnetic Brakes		I	I	I	I/3	I/3
	Connection to the Electrical System			I		I	
Batteries	Loose or Corroded Terminals			I		I	
	Connection to the Electrical System			I		I	
	Damage to the Electrical Cord/Cable			I		I	
Charger	Charging Function and LED Light	I	I	I	I/△	I/△	I/△
	Socket, Plug and Cords			I		I	
	Fan Functions Properly (if applicable)			I		I/△	
Tires	Cracks/Surface Damage	I/3	I/3	I/3	I/3	I/3	I/3
	Tread Depth		I	I/3	I	I/3	I
	Abnormal Wear Pattern			I/3		I/3	
Wheel Rim	Tightness of Bolts and Nuts			T		T	
	Wear or Deformation Around Tires			I/3		I/3	

7.3 Tires

7.3.1 The condition of the tires is affected by the way you drive and use your wheelchair.

7.3.2 Inspecting Tire Tread: please check the tread depth regularly. Replace the tires when the tread depth is less than 0.5 mm.

7.4 General Maintenance

7.4.1 You must maintain the vehicle more frequently if you drive on grass, sand

or gravel roads often.

7.4.2 Do not use water, oil or other chemical solutions to clean your wheelchair. Be sure NOT to spray the vehicle with water, as not to damage the electronic components and PCB circuit board.

7.4.3 Please clean the vehicle by wiping it with either a dry or moist cloth.

7.4.4 Please take the vehicle to an authorized KARMA wheelchair dealer for repairs and adjustments. Improper adjustments could lead to wheelchair malfunction or an accident.

⚠ CAUTION

- **Before performing any maintenance, be sure to turn the power OFF and unplug the charger if connected.**
- **DO NOT over-tighten any hardware. This could cause damage to the frame and hardware.**

ⓘ SUGGESTION

- **Do not directly spray water on your wheelchair to wash it, as this could lead to a malfunction in the electric system.**
- **Do not use gasoline, solvents or other abrasive solutions; the casing may become deformed or damaged.**

⃠ WARNING

- **After ANY adjustments, repair or service and BEFORE use, make sure that all hardware is tightened securely, otherwise injury or damage may occur.**

7.5 Suggested Maintenance Procedures

7.5.1 Before using the powered wheelchair, make sure all nuts and bolts are tight.

7.5.2 Check all parts for damage or wear and have a qualified technician replace it if necessary.

7.5.3 Check all parts for proper adjustment.

7.5.4 Ensure that the batteries are properly maintained and charged as required.

7.5.5 Inspect brake for proper operation.

7.5.6 The wheels and tires should be checked periodically for cracks and wear, and should be replaced by a qualified technician.

7.5.7 Regularly check for loose nuts and/or bolts in the front and rear wheels. If loose, have them adjusted by a qualified technician.

7.5.8 Clean dirt, dust and grease from exposed components.

7.5.9 A qualified technician can be found with an authorized distributor/dealer.

7.6 KP-10.3 Series Instructions for Lubrication

Please view below for the instruction of lubricating the parts on the wheelchair.

7.6.1 Caster Bracket (see figures 7-1)

7.6.2 Backrest Angle Adjustment Ring (see figures 7-2)

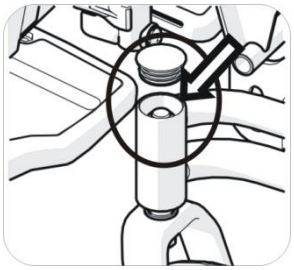


Figure 7-1

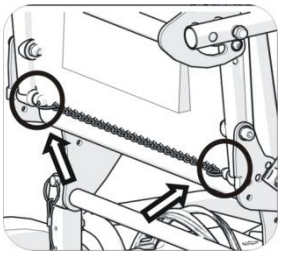


Figure 7-2

⚠ CAUTION

- **Before lubrication, do clean the area.**
- **When lubricating, use just 1-2 drops of oil (not grease), as extra oil will fall on the rug and pollution as a result of over-lubrication.**
- **Depending on how often you use the chair, normally 1-2 times of lubrication per month is fine. Proper lubrication can extend the life span of a part in addition to prevent noise from accruing. Check if the bolts are fastened while lubrication.**

7.7 Transporting and Storing

7.7.1 The wheelchair may be disassembled for ease of transport. Please refer to section 5 for more detailed information on the individual steps. Reverse the order for reassembly.

7.7.2 Remove the seat from the lower body. Be sure that wire connected to the controller is detached.

7.7.3 Remove the swing-away footrests.

7.7.4 Carry the body of the wheelchair by the front and back frame using two people.

7.7.5 Do not lift the lower body by the casing or any detachable parts

7.7.6 Please store the wheelchair in a location where it is out of direct sunlight,

rain and dew.

7.7.7 When stored for a long time, please charge the batteries to full and then disconnect the battery terminals.

7.7.8 For more details, consult your KARMA wheelchair dealer.

8. OPTIONAL ACCESSORIES

Please contact your dealers for the accessories.

⚠ CAUTION

- **DO NOT use parts, accessories or adapters other than those authorized by KARMA.**
- **Attaching accessories may alter the overall stability and centre-of-gravity of the chair. Thus, this should be performed by an authorized dealer/ technician or qualified therapist.**
- **Be aware that adding accessories/components or modifying the powered vehicle may make it more susceptible to EMI. There is no easy way to evaluate their effect on the overall immunity of the powered vehicle.**

9. TROUBLESHOOTING

9.1 Trouble or Problems with Your Wheelchair

9.2 You can inspect the following before taking your wheelchair to a KARMA wheelchair dealer.

Problem	Checking Points and Corrective Action
My wheelchair does not start.	Is the power turned OFF ? ↓ Unlocked the seat release lever.
	Do the batteries still have power? Is the battery indicator light not on? ↓ Charge the batteries.
	Is the charger plugged into the wheelchair? ↓ Unplug the charger and put it away

If you cannot solve the problem by yourself, contact your KARMA wheelchair dealer for help

9.3 VRII Controller, Battery& Diagnostics Indicator

The following table indicates what the gauge will display for any given state.

Indication	Status	Meaning	What to do
	1signal	The battery needs charging or there is a bad connection to the battery.	Check the connections to the battery. If the connections are good, try charging the battery.
	2 signals	The left hand motor has a bad connection.	Check the connections to the left hand motor.
	3 signals	The left hand motor has a short circuit to a battery connection.	Connect your service agent.
	4 signals	The right hand motor has a bad connection.	Check the connections to the left hand motor.
	5 signals	The left hand motor has a short circuit to a battery connection.	Connect your service agent.
	6 signals	The wheelchair is being prevented from driving by an external signal.	Please remove the charger.
	7 signals	A joystick fault is indicated.	Make sure that the joystick is in the center position.
	8 signals	A joystick fault is indicated.	Make sure that all connections are secure.
	9 signals	The parking brakes have a bad connection.	Check the parking brake and motor connections and make sure all connections are secure.
	10 signals	An excessive voltage has been applied to the control system.	Check the battery connections.

	10 signals + Speed indicator	A communication fault is indicated.	Make sure that the joystick cable is securely connected and not damaged.

10. SPECIFICATIONS

(±1 ㎝±1 ㎏)

Model / Description	KP-10.3
Seat Width	17” (44 cm)
Frame	Iron/ Aluminum-Alloy
Batteries	Sealed Lead Acid Batteries 22Ah x2pcs
Max. Speed	6 km/hr
Motor	DC 200W x 2pcs
Safe Slope	8 degrees
Range (km)	15 km
Max. Obstacle Climbing Ability (mm)	50 mm
Brake System	Automatic Electromagnetic Brake
Controller	VR2 PM50 50A
Charger	Input: AC 115/230 V Output; DC 24 V 4A
Wheel Size	Front Casters: PU Tire 200x 50 mm Rear Wheels: PU Filled Tire 12.25"x2.25"
Backrest Angle	95 ° /109 °
Armrest Height	210 mm ~270 mm
Suspension System	No
Overall Length	1050 mm (Including Anti-Tippers)
Overall Width	620 mm
Overall Height	940 mm
Turning Radius	825mm
Weight W/O Batteries	35.1 kg
Total Weight	49.1 kg
Max. User Weight	115kg

(±1 ㎝±1 ㎏)

Model / Description	KP-10.3S
Seat Width	17” (44 cm)
Frame	Iron
Batteries	Sealed Lead Acid Batteries 22Ah x2pcs
Max. Speed	6 km/hr
Motor	DC 200W x 2pcs
Safe Slope	8 degrees
Range (km)	15 km
Max. Obstacle Climbing Ability (mm)	50 mm
Brake System	Automatic Electromagnetic Brake
Controller	VR2 PM50 50A
Charger	Input: AC 115/230 V Output; DC 24 V 4A
Wheel Size	Front Casters: PU Tire 200x 50 mm Rear Wheels: PU Filled Tire 12.25"x2.25"
Backrest Angle	95 ° /109 °
Armrest Height	210 mm ~270 mm
Suspension System	No
Overall Length	1030 mm (Including Anti-Tippers)
Overall Width	620mm
Overall Height	940 mm
Turning Radius	760 mm
Weight W/O Batteries	35.4 kg
Total Weight	49.8 kg
Max. User Weight	115 kg

(±1 ㎝±1 ㎏)

Model / Description	KP-10.3S
Seat Width	17” (44 cm)
Frame	Iron
Batteries	Sealed Lead Acid Batteries 36Ah x2pcs
Max. Speed	6 km/hr
Motor	DC 200W x 2pcs
Safe Slope	8 degrees
Range (km)	28 km
Max. Obstacle Climbing Ability (mm)	50 mm
Brake System	Automatic Electromagnetic Brake
Controller	VR2 PM50 50A
Charger	Input: AC 115/230 V Output; DC 24 V 4A
Wheel Size	Front Casters: PU Tire 200x 50 mm Rear Wheels: PU Filled Tire 12.25"x2.25"
Backrest Angle	95 ° /109 °
Armrest Height	210 mm ~270 mm
Suspension System	No
Overall Length	1030 mm (Including Anti-Tippers)
Overall Width	620mm
Overall Height	940 mm
Turning Radius	760 mm
Weight W/O Batteries	37.5 kg
Total Weight	61.5 kg
Max. User Weight	115 kg

10.1 All the specifications specified in this section 10. SPECIFICATIONS are estimated based on the following conditions: 20℃~35℃(68℉~95℉) , an 80 kg (176 lbs) driver, brand new fully charged batteries and on a flat road.

10.2 The specifications are ±1cm, ±1kg or 1% in tolerence.

10.3 KARMA reserves the right to modify information herein without further notice. Product specification could be varied according to customer requirements.

10.4 KP-10.3 & KP-10.3S Static Stability Test Rresult

Dummy: 115kg

Test Requirement	KP-10.3		KP-10.3S	
	Min.	Max.	Min.	Max.
Static Stability Uphill	13°	15.3°	11°	13.5°
Static Stability Downhill	21.5°	24.3°	25.5°	28.5
Static Stability Sideway	20.9°	21.2°	20.5°	20.6°

11. CLEANING & RECYCLING

11.1 Cleaning

11.1.1 In order to lengthen the life of your wheelchair, it is suggested that you clean the wheelchair periodically (if not daily), especially after it is used in the rain or snow.

11.1.2 We suggest that you don't use your wheelchair in the rain or snow.

11.1.3 If you are traveling and get caught in the rain, we suggest you try to find shelter and turn OFF your wheelchair while waiting it out.

11.1.4 If you can't find shelter, proceed to your destination.

11.1.5 However we do not recommend you do this often as it may shorten the life of your wheelchair or cause damage.

11.1.6 Driver's seat upholstery: use soapy water. Wring out the sponge/ cloth before scrubbing. Do not use the wheelchair until it is dry.

11.1.7 Frame: wipe with a damp cloth, but be sure not to splash/spray the wheelchair with water, as doing so may damage the motor, electrical wiring and battery.

11.1.8 If compressed air is available, you can use the compressed air to clean your wheelchair (do not exceed 7K and keep the nozzle at least 10 cm away from your wheelchair).

11.1.9 Casing: wipe with a damp cloth. After it is dry, coat the casing with a light layer of wax, if desired.

11.2 Post-Consumer Recycling

11.2.1 A post-consumer recycling plan should follow the Environmental Protection Administration's regulations.

11.2.2 The items listed below are for reference only as local law and regulation may vary.

Material	Part Name	Method
Iron/Aluminum-alloy	Frame	Recyclable
ABS	Various	Recyclable
Various	Battery	Recyclable
Various	Motor/Reduction Gear	Recyclable
Various	Electric Parts	Recyclable

11.2.3 There are many organizations in many countries you can find on the internet that will accept used goods for charity or disassemble electronic equipment and batteries to recycle them.

11.2.4 Please search the information highway to help less fortunate individuals and protect our planet for future generations.

11.2.5 If you do not have access to the world wide web please use your local phone directory, ask for operator assistance or go to your local government centre for more information. Earth Day is every day.

11.2.6 Check with your local recycling centre on where and how to recycle used batteries as this

11.2.7 Information varies from region to region.

12. WARRANTY

12.1 Serial Number

To ensure after-sale service and warranty, please record and fill in the vehicle identification number. The serial number can be found on the steering column below the control panel.

Model	KP-10.3 Series
Serial Number	

12.2 Warranty Policy

12.2.1 Contents and Duration of Warranty

■ Contents of Warranty

12.2.1.1 Repair will be provided free of charge if the problems are due to manufacturing or defective components within the warranty period(a repair of this kind will hereafter be called warranty repair).

12.2.2.2 The warranty repair can be performed by authorized KARMA wheelchair dealers only.

12.2.2.3 KARMA is not responsible for the transportation costs for repair and replacement.

12.2.2.4 Replaced parts will be the property of KARMA.

■ Warranty Duration and Parts Covered By the Warranty

Items	Warranty Duration
Electronic Items (Motor,Controller, Charger)	One year from the date of purchase.
Frame	One year from the date of purchase.
Batteries	Please contact your local dealer for detailed information.

12.2.2 Items Not Covered by the Warranty

■ Items Not Covered

The items listed below are not covered:

12.2.2.1 Consumable parts such as brake shoes or pads, clutch shoe and lining, light bulbs, fuses, upholstery and seating, brake cable, oil seal packing and gasket, screws/bolts and washers, lubricant oil and

grease, carbon brush inside the motor, battery liquid, footrest carpet, et cetera;

12.2.2.2 Those that do not affect the quality and functioning of the wheelchair such as noise or vibration;

12.2.2.3 Wear and tear resulting from usage as well as conditions resulting from lapse of time (e.g., normal aging and Deterioration of paint, electroplating, plastic parts, etc);

12.2.2.4 Damage due to a lack of maintenance or improper operation and storage;

12.2.2.5 Fees for routine inspections, adjustments, adding oil, cleaning and other maintenance;

12.2.2.6 Fees for regular inspections and maintenance;

12.2.2.7 Any fees incurred as a result of warranty repair, loss or compensation because of the unavailability of the wheelchair(telephone use, shipping, car rental, travel costs, et cetera).

■ PROBLEMS NOT COVERED

Problems caused by the following reasons are not covered:

12.2.2.8 Failure to carry out the regular inspection and maintenance recommended by this owner's manual;

12.2.2.9 Improper storage;

12.2.2.10 Tampering by changing or adding components to the vehicle, which are not approved by KARMA;

12.2.2.11 Damage caused by using non-KARMA genuine parts or other parts not recommended by KARMA;

12.2.2.12 Abuse or misuse of the vehicle such as driving over curbs and overloading the wheelchair with passengers or goods;

12.2.2.13 Driving in places where the vehicle should not normally be driven or used;

12.2.2.14 Damage or surface corrosion from environmental factors such as airborne fallout(chemicals, tree sap, et cetera), stones, hail, windstorms, lighting, floods and so on;

12.2.2.15 Change of any material or component parts not authorized by KARMA (don't carry objects that may lead to the wheelchair being

unbalanced);

12.2.2.16 The wheelchair shall not be pulled or pushed by another vehicle when there is a person on the wheelchair or the rear wheels are not set to the freewheel mode; and

12.2.2.17 Do not drive a wheelchair that is older than 10 years without having its structure inspected.

12.2.3 The Responsibilities of the User

12.2.3.1 Proper use of the vehicle in accordance with this owner's manual;

12.2.3.2 Performance of the daily inspections;

12.2.3.3 Performance of the regular maintenance recommended by KARMA; and

12.2.3.4 Keep a record of vehicle inspection and maintenance in the back of this owner's manual.

12.2.4 Warranty Effectiveness

12.2.4.1 The warranty form must be completely filled out and stamped by the KARMA wheelchair dealership where the wheelchair was purchased.

12.2.5 Transfer of Warranty Rights

12.2.5.1 If you purchase a second-hand KARMA wheelchair while it is still with in the warranty period, bring the owner's manual and the vehicle to the dealership where the wheelchair was purchased for registration.

12.2.6 Warranty Form (You May Photocopy This From)

Full Name:	
Gender:	
Date of Birth:	
Address:	
Model:	
Serial Number:	
Date of Purchase:	
Purchaser Signature:	

Dealer's Data

Name of Store:	
Telephone and Address:	

If you have any suggestions on how to improve our products, please don't hesitate contacting your local dealer to let us know what you think of your wheelchair.Thank you and enjoy.

karma

National agent:

Sold and serviced by:

KARMA MEDICAL PRODUCTS CO., LTD.

Http://www.KarmaMedical.com

E-mail:globalsales@karma.com.tw

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